

Remarks/Arguments

Upon entry of the foregoing amendments, claims 30, 31 and 38 to 47 will be pending in this patent application. Claims 1 to 29, and 32 to 37 have been previously canceled, without prejudice. Claims 30 and 31 have been amended. Claims 38 to 47 are new.

Support for the foregoing amendments is found throughout Applicants' specification such as, for example, at page 11, lines 4 to 17; page 15, line 28 to page 16, line 27; and Examples 13 to 20 at pages 36 to 45. No new matter has been added.

The Action includes a rejection under 35 U.S.C. § 103(a). In view of the following remarks, reconsideration and withdrawal of the rejection are requested respectfully.

Telephonic Interview

Applicants wish to thank Examiner Blum for the telephonic interview on May 2, 2006 with Applicants' representative, the undersigned, to discuss the present rejection for alleged obviousness over published U.S. patent application 2002/0142585 to Mandal et al. ("Mandal"). Although no agreement was reached during the interview, a constructive dialogue was nevertheless opened in which Applicants' representative better understood the issues raised at page 4 of the Action. In this regard, the Examiner explained that the claims should be amended to more clearly recite that the structure-former precursor and the pore-former precursor are ***separate and different*** compounds (each having its own respective function) as opposed to one compound with two functionalities (*i.e.*, structure forming ***and*** pore forming functions) such as, for example, those disclosed by Mandal.

Discussion of the Rejection Under 35 U.S.C. § 103(a)

Claims 30 and 31 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Mandal in view of the article C. Waldfried, et al., "Single Wafer RapidCuring™ of Porous

Low-k Materials", IEEE (2002), pp. 226-228 ("Waldfried"). Applicants respectfully traverse this rejection as the Action fails to provide any reason why a person of ordinary skill in the art presented with Mandal and Waldfried at the time of the invention would have been motivated to modify their teachings in such a way as to obtain Applicants' claimed invention.

Although Applicants maintain that claims 30 and 31 distinguish over the cited prior art for the reasons of record, Applicants have amended the claims to more clearly recite that the structure-former precursor and the pore-former precursor are **separate and different** compounds each having its own function (*i.e.*, a structure-forming function and a pore-forming function, respectively). As amended, Applicants' claimed invention defines a **mixture** for depositing an organosilicate film comprising a dielectric constant of 3.5 or below, the mixture comprising at least one structure-former precursor selected from the group consisting of an organosilane and an organosiloxane and a pore-former precursor, wherein **the pore-former precursor is selected from the group consisting of (i) a hydrocarbon compound having from 1 to 13 carbon atoms, (ii) a decomposable polymer, (iii) a polyoxyalkene, and mixtures thereof**, wherein at least one precursor and/or the organosilicate film exhibits an absorbance in the 200 to 400 nm wavelength range (*see, e.g.*, claim 30).

To establish a *prima facie* case of obviousness, it is fundamental that the prior art must teach or suggest all the claim limitations. MPEP § 2143; *In re Evanega*, 4 USPQ.2d 1249 (Fed Cir. 1987). The combination of Mandal and Waldfried is **incapable** of rendering Applicants' claims obvious because such combination does not teach or suggest "a **mixture** for depositing an organosilicate film comprising ... at least one structure-former precursor ... and a pore-former precursor" as is defined by Applicants' claimed invention (*see, e.g.*, claim 30).

Applicants' claimed invention recites that the structure-former precursor and the pore-former precursor are **separate and different** and each having its own respective function. In this regard, the structure-former precursor is specifically defined as an organosilane and an organosiloxane. To the extent that the pore-former precursor is defined as a hydrocarbon compound (i) and a polyoxyalkene (iii), such compounds **by definition** are not (and cannot be) an organosilane or an organosiloxane and, thus, are separated and different compounds. Moreover, to the extent that the pore-former precursor is defined as a decomposable polymer (ii), such compounds **by definition** are not (and cannot be) an organosilane or an organosiloxane because organosilanes and organosiloxanes do not decompose in the context of the present invention; to the contrary, organosilanes and organosiloxanes function to provide the structural properties of the low dielectric constant films made therewith. Indeed, a pore-former precursor defined as decomposable polymer is a separate and different compound from than the structure-former precursor and is inherently incapable of providing the structure-forming function.

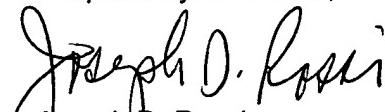
Thus, for at least this reason, Mandal – either alone or in combination with Waldfried – cannot render Applicants' claimed invention obvious because Mandal does **not** disclose or suggest the claimed **mixture**. Accordingly, reconsideration and withdrawal of the rejection under 35 U.S.C. § 103(a) are requested respectfully.

Conclusion

Applicants believe that the foregoing constitutes a complete and full response to the Action of record. Applicants respectfully submit that this application is now in condition for allowance. Accordingly, an indication of allowability and an early Notice of Allowance are respectfully requested.

The Commissioner is hereby authorized to charge the fee required and any additional fees that may be needed to Deposit Account No. 01-0493 in the name of Air Products and Chemicals, Inc.

Respectfully submitted,


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